

# Statewide Daily Vehicle Hours Delay Reduced by 2016 on State Highways by Pyramid Element Recurrent Delay on Urban Freeways

<b>Current:</b>	<b>558,143</b>	Daily Vehicle Hour Delay (DVHD)
<b>2016 with Status Quo:</b>	<b>753,000</b>	DVHD
<b>Increase Current - 2016:</b>	<b>194,857</b>	DVHD
<b>Reductions by Pyramid Elements:</b>	<b>298,500</b>	DVHD
<b>2016 w/Pyramid Elements:</b>	<b>454,500</b>	DVHD

## Reductions from Pyramid Elements

### Primary Reductions by 2016

	DVHD
ITS / TMS >10%	75,000
Operational Improvements >10%	75,000
System Completion >9%	67,500
Timely Rehab >1%	6,000
Land Use and Demand Management <10%	75,000
Estimated Reductions in DVHD *	298,500

\* Requires aggressive, coordinated, project completion and cooperative actions of local jurisdictions (such as approval to meter ramps).

			2005 - 2016 Daily Vehicle Hours of Delay Reduced											
			2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Level of Recurrent Delay (DVHD) - Status Quo →			558,143	575,857	593,571	611,286	629,000	646,714	664,429	682,143	699,857	717,571	735,286	753,000
Reduced Level of Recurrent Delay with GoCalifornia →					**	**	603,100	603,028	602,941	596,352	582,508	557,981	517,727	454,500
Reduced Delay Hours All Pyramid Elements →					**	**	25,900	43,686	61,488	85,791	117,350	159,590	217,559	298,500
Primary Reductions to Recurrent Delay by 2016 By Directed Investment		\$ (Billions)												
System Completion and Expansion >9% (67,500 hrs/day)		\$45.525					6,585	17,012	23,990	32,692	41,394	50,096	58,798	67,500
Complete HOV Systems and Focus Routes		\$21.214												
Expand Freight Corridors, Complete Regional Priority Routes, Tribal Roads		\$18.857												
Expand Existing Transit Rail, New Urban Commuter Rail, Intercity Passenger Rail		\$4.511												
Expand Park and Ride, Improve Bicycle and Pedestrian		\$0.943												
Operational Improvements >10% (75,000 hrs/day)		\$27.278			**	**	7,182	10,312	13,471	18,518	26,692	34,597	50,939	75,000
Fund SHOPP Plan (Operational Improvements 310's & 321's)		\$3.775			Immediate Short-term Congestion Relief Projects Some Reduction in DVHD Accrues in Operational Improvements and TMS Master Plan Elements									
Fund SHOPP - Safety Improvements		\$4.132												
Corridor Mobility Management Program (Performance Measurement and Evaluation, Major Congested Corridors (TOPS Levels 1-3), Includes ITS on Local Arterial and Modal Systems)		\$18.900												
Improve Transit and Rail Services		\$0.471												
ITS/Traveler Info/Traffic Control/Incident Mgt-TMS Master Plan (>10% - Reduce Delay by 75,000 hrs/day)		\$3.300			**	**	7,182	10,312	13,471	18,518	26,692	34,597	50,939	75,000
Implement TMS Master Plan (Included in ITS)														
Fund SHOPP ITS Element (SHOPP 315's)		\$2.376												
Improve Central and Field Element Ops & Maint		\$0.627												
Expand Freeway Service Patrol		\$0.297												
Smart Land Use/Demand Management/Value Pricing <10% (75,000 hrs/day)							2,500	3,000	7,000	12,000	18,000	35,222	51,298	75,000
Preservation and Rehabilitation >1% (6,000 hrs/day)							2,450	3,050	3,557	4,064	4,571	5,079	5,586	6,000
Fund SHOPP Plan Roadway, Roadside, Bridge, Mandates, Facilities and Emergency Repair		\$28.948												
System Monitoring and Evaluation (Cost and Delay Reductions in TMS)														
TOTAL FOR PRIMARY REDUCTIONS \$105.051			-Implement PeMS -Fix loops, implement statewide detection -Evaluate Major Congested Corridors (TOPS Levels 1 - 3) -Identify Strategies, Actions & Projects -Develop Comprehensive Corridor Plan  Some Reductions Accrue				- Perform Project Development - Build Transit Vehicles and Rail Cars - Develop ITS Corridor and System Integration Design  Some Reductions Accrue				- Construct Projects - Deploy ITS and Integrate Systems - Implement Operational Improvements  Most Delay Reductions Accrue			
* Current Congestion Estimated (grown) from HICOMP 2002. (Data available at initiation of this effort)														
** Unquantified DVHD reduced from short term operational improvements implementation. COS Included in all costs at 32%. Operations and Maintenance (O and M) not included.														

\* Current Congestion Estimated (grown) from HICOMP 2002.  
(Data available at initiation of this effort)

\*\* Unquantified DVHD reduced from short term operational improvements implementation.

COS Included in all costs at 32%.

Operations and Maintenance (O and M) not included.